

WHAT IS CLAIMED IS:

1. A method of controlling a multicast transmission, comprising:
  - (a) transmitting a data packet to a plurality of slave devices across an ultra wideband (UWB) wireless network;
  - (b) detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of slave devices; and
  - (c) retransmitting the data packet to at least one of the plurality of slave devices when an acknowledgment is not detected for each of the plurality of slave devices.
2. The method of claim 1, further comprising:
  - (d) counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of slave devices; and
  - (e) foregoing retransmission of the data packet when said number of consecutive times exceeds a predetermined threshold and when step (b) detects an acknowledgement transmission from the each of the plurality slave devices except for said particular slave device.
3. The method of claim 1, wherein step (b) comprises receiving said any acknowledgement transmissions from the UWB wireless network.
4. The method of claim 1, wherein step (b) comprises receiving said any acknowledgement transmissions from a transmission media different than the UWB wireless network.
5. The method of claim 4, wherein the different transmission media comprises Bluetooth.
6. The method of claim 1, wherein step (b) comprises correlating received signals with a predetermined acknowledgement sequence during a time slot allocated to the slave devices for acknowledgement transmission.

7. The method of claim 6, wherein step (b) further comprises:  
generating a correlation signal from the predetermined acknowledgement sequence and received transmissions; and  
counting the number of times the correlation signal exceeds a predetermined threshold.
8. The method of claim 7, wherein said counting step is performed during a time division multiple access (TDMA) time slot allocated to upstream transmissions from the plurality of slave devices.
9. The method of claim 7, wherein step (c) comprises retransmitting the data packet when the number of times the correlation signal exceeds the predetermined threshold is less than the number of the plurality of slave devices.
10. The method of claim 6, wherein step (b) further comprises:  
generating a correlation signal from the predetermined acknowledgement sequence and received transmissions; and  
determining whether the correlation signal exceeds a predetermined threshold during each of a plurality of time division multiple access (TDMA) time slots, wherein each of the TDMA time slots are allocated to respective one of the plurality of slave devices.
11. The method of claim 10, wherein step (c) comprises retransmitting the data packet when the correlation signal fails to exceed the predetermined threshold during each of the plurality of time division multiple access (TDMA) time slots.
12. The method of claim 10, further comprising:  
counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of slave devices; and  
foregoing retransmission of the data packet when:  
(1) the correlation signal fails to exceed the predetermined threshold during each of the plurality of time division multiple access (TDMA) time slots, and

(2) said number of consecutive times exceeds a second predetermined threshold.

13. A wireless communications device, comprising:

a transmission buffer configured to store a packet for transmission across an ultra wideband (UWB) wireless network to a plurality of slave devices;

a retransmission buffer configured to store a retransmission packet, the retransmission packet being previously transmitted across the UWB wireless network; and

a retransmission controller configured to receive one or more acknowledgment transmissions from the plurality of slave devices;

wherein the retransmission controller is further configured to cause the retransmission buffer to send the retransmission packet to the plurality of slave devices across the UWB wireless network when an acknowledgment is not detected for each of the plurality of slave devices.

14. The wireless communications device of claim 13, wherein the retransmission controller is further configured to:

counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of slave devices; and

forego retransmission of the data packet when said number of consecutive times exceeds a predetermined threshold and when an acknowledgement transmission from the each of plurality slave devices except for said particular slave device is detected.

15. The wireless communications device of claim 13, wherein said acknowledgement transmissions are received from a transmission media different than the UWB wireless network.

16. The method of claim 15, wherein said the different transmission media comprises Bluetooth.

17. A system for controlling a multicast transmission, comprising:

means for transmitting a data packet to a plurality of slave devices across an ultra wideband (UWB) wireless network;

means for detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of slave devices; and

means for retransmitting the data packet to the one or more slave devices when an acknowledgment is not detected for each of the one or more slave devices.

18. The system of claim 17, further comprising:

means for counting the number of consecutive times an acknowledgement packet is not received from a particular one of the plurality of slave devices; and

means for foregoing retransmission of the data packet when said number of consecutive times exceeds a predetermined threshold and when said means for detecting detects an acknowledgement transmission from the each of the plurality slave devices except for said particular slave device.

19. The system of claim 17, further comprising means for receiving said any acknowledgement transmissions from a transmission media different than the UWB wireless network.

20. The system of claim 19, wherein the different transmission media comprises Bluetooth.

21. A computer-readable medium encoded with processing instructions for implementing a method of controlling multicast transmission, performed by a wireless communications device, the method comprising:

(a) transmitting a data packet to a plurality of slave devices across an ultra wideband (UWB) wireless network;

(b) detecting the reception of any acknowledgement transmissions, wherein each acknowledgement transmission indicates reception of the data packet by a respective one of the plurality of slave devices; and

(c) retransmitting the data packet to at least one of the plurality of slave devices when an acknowledgment is not detected for each of the plurality of slave devices.

22. A computer-readable medium of claim 21 encoded with processing instructions for implementing a method of controlling multicast transmission, performed by a wireless communications device, wherein step (b) comprises receiving said any acknowledgement transmissions from a transmission media different than the UWB wireless network.

23. A computer-readable medium of claim 22 encoded with processing instructions for implementing a method of controlling multicast transmission, performed by a wireless communications device, wherein the different transmission media comprises Bluetooth.